

THE VARIETIES OF *HIERACIUM SCABRUM*.

M. L. FERNALD AND HAROLD ST. JOHN.

ON the Magdalen Islands and on Sable Island plants clearly allied to the continental *Hieracium scabrum* Michaux depart in some characters from the typical *H. scabrum*, as shown by Michaux's type material and by the common plant extending from Lake Mistassini to the mountains of North Carolina. In true *H. scabrum* the lower internodes of the stem, the petioles, and the midribs (beneath) are conspicuously clothed with long slender, often sordid, trichomes 2–3 mm. in length, while the upper surface of the leaf bears somewhat scattered trichomes (on the median cauline leaves 0.5–2. mm. long). The branches of the inflorescence and the peduncles are more or less tomentose and heavily beset with dark stipitate glands, but neither the tomentum nor the glands extend to the lower half of the plant.

In the Sable Island plant the stem lacks the elongate trichomes and is covered, often from base to summit, by a dense pannose white tomentum. Numerous short stiff trichomes, barely 1 mm. in length, are mixed with the characteristic glands, while both surfaces of the leaf are glabrous except for minute, commonly gland-tipped hairs. In the branches of its inflorescence and its involucre the Sable Island plant closely matches dwarfed, but large-headed, plants of *H. scabrum* and in its fruit-characters seems inseparable from that species.

On the Magdalen Islands true *H. scabrum* occurs, but the distinctive plant of the region differs in having the lower half of the stem and the leaves nearly glabrous or at most with very short sparse trichomes (not exceeding 0.5 mm. in length) often mingled with scattered glands. A similar and apparently indistinguishable plant is represented in the Gray Herbarium from other sections of eastern Quebec and from north-central Maine, where it has been collected with typical *H. scabrum*, while all the material seen by us from the north side of Lake Superior and the Keweenaw Peninsula of Michigan is of this extreme variant.

In the course of this study a singular plant from Athens, Illinois, has attracted our attention and seems to represent another extreme of *H. scabrum*, in this case tending to an excessive development of slender trichomes. In the Athens plant the sordid trichomes of the lower half of the stem, the midribs, and both leaf-surfaces are almost uni-

formly developed, those on the upper surface of the median cauline leaves being 3–5 mm. long.

In their extremes these four variants appear so different that they might, to some botanists, seem to be distinct species; but in the essential characters of the inflorescence, including the involucre and achenes, they appear inseparable, and their differential characteristics are merely somewhat localized recombinations of a series of variable tendencies of the pubescence. As geographic varieties, however, they are very definite and we propose those heretofore unnamed as

HIERACUM SCABRUM Michx., var. **leucocaula**, n. var., humile 1–2.5 dm. altum multis cum foliis; caule prope apicem et saepius per totam longitudinem cum tomento denso et albo tecto et cum glandulis atris stipitatisque instructo; foliis 15–25 coarctatis oblongis vel elliptico-obovatis, superioribus gradatim minoribus, foliis mediis caulinis 2–5 cm. longis, utrinque brevissime glanduloso-pilosis infra costa hispidis cum pilis 0.5 mm. longis vel saepe brevioribus quibus cum glandulis stipitatis mixtis.

Low, 1–2.5 dm. high, very leafy: stem invested toward the summit and more often throughout with dense white tomentum mixed with dark stipitate glands: leaves 15–25, crowded, oblong or elliptic-obovate, gradually diminishing upward, the median cauline ones 2–5 cm. long, both surfaces minutely glandular pilose, the midrib hispid beneath with hairs 0.5 mm. or less in length intermixed with stipitate glands.—NOVA SCOTIA: Sable Island, September, 1911, *H. T. Gussow*, Empetrum heaths and sand dunes, September 6 and 11, 1913, *St. John*, nos. 1357 & 1358 (TYPE in Gray Herbarium).

H. SCABRUM Michx., var. **tonsum**, n. var., quam forma typica, gracilius 3–5 dm. altum subscaposum vel cum foliis paucis instructum; caule infra glabrescente vel pilis 0.2–0.6 mm. longis saepe paulum glandulosis hispidulo, caulibus apice ramisque inflorescentiae albido-tomentosis cum glandulis nigris stipitatis valde tectis; foliis plerumque radicalibus, caulinis 4–11 parvis remotis, utrinque glabris vel paulo brevi-setulosis, costis infra marginibusque cum trichomis vix 0.5 mm. longis hispidis saepe cum glandulis sparsis permixtis.

Rather slender, 3–5 dm. high sparingly leafy or sub-scapose: stem glabrescent or hispidulous below with hairs 0.2–0.6 mm. long, and often slightly glandular; summit of the stem and branches of the inflorescence white-tomentose and heavily invested with black stipitate glands: leaves mostly basal, the cauline 4–11, remote and small; both surfaces glabrous or sparingly short setulose, the midribs (beneath) and margins hispid with trichomes barely 0.5 mm. long, often mingled with scattered glands.—QUEBEC: dry clearings, southwest of Etang du Nord, Magdalen Islands, August 22, 1912, *Fernald, Long & St. John*, no. 8291 (TYPE in Gray Herbarium); recent clearing, Douglastown, Gaspé County, August 21 and 22, 1904, *Collins, Fernald & Pease*;

vicinity of Cap à l'Aigle, August 3, 1905, *J. Macoun*, no. 68,351, in part. MAINE: dry open woods, Dover, August 7, 1895, *Fernald*, no. 398, in part. ONTARIO: Lake Superior region, *Loring*. MICHIGAN: Isle Royale, August 10, 1909, *W. S. Cooper*, no. 32; moist grassy places, Keweenaw County, July, 1889, *O. A. Farwell*, no. 49a.

H. SCABRUM Michx., var. **intonsum**, n. var., caule infra cum trichomis gracilibus sordidis 3–5 mm. longis villosis; foliis pluribus 20–30 subaequalibus vel paucioribus 12–20 superioribus manifeste minoribus, utrinque villosis cum uniformibus longis sordidis trichomis, quibus foliorum mediorum 3–5 mm. longis; ramis inflorescentiae tomentosae glandulosaeque.

Tall, 5–11 dm. high; stem densely villous below with slender sordid trichomes (3–5 mm. long): leaves rather numerous (20–30) and subequal, or fewer (12–20) and rapidly decreasing upward, villous on both surfaces with uniform long sordid trichomes, those of the median leaves 3–5 mm. long: branches of the inflorescence tomentose and glandular. — ILLINOIS: "In nemorosis sterilibus pr. Athenas," September, *E. Hall*, no. 35 (TYPE in Gray Herbarium); and "In collibus aridis," Athens, *Hall*, nos. 36, 178 & 179.

GRAY HERBARIUM.

AVENA FATUA IN EASTERN MASSACHUSETTS.— On July 1, 1914, one plant of an unfamiliar Oat was found growing by the roadside on Eliot St., Sherborn, Mass. This was placed with the Boston Society of Natural History (No. 1516). On August 13 another and larger plant was collected on Rockwood St. This was divided, one half being sent to the Boston Society (No. 1563), and the other to the Gray Herbarium where my determination as *Avena fatua* L. was confirmed by Mr. Frank C. Seymour, who also informed me that probably the species had not been found nearer than New Jersey. On August 17, another plant (No. 1567) was found on Eliot Street and August 26 still another in an abandoned chicken-yard on Main Street. The stations are all at some distance from each other. This is probably the first record of the finding of this species in New England the range as given in the "Manual" being "Ont. and O. (rare); Wisc., Ill., and westward." — MARTHA LOUISE LOOMIS, Sherborn, Massachusetts.

Avena fatua was reported among the ballast weeds of New York and Philadelphia in the Preliminary Catalogue of Anthophyta and Pteridophyta of the Torrey Botanical Club, page 89 (1888). It was also included in J. N. Bishop's Catalogue of all Phaenogamous and Vascular Cryptogamous Plants in the State of Connecticut, ed. 2, page 21 (1896) and ed. 3, page 8 (1901), as occur-